

FILLING THE GAPS: Environmental Protection Options For Local Governments

TABLE OF CONTENTS

PART I The Big Picture

INTRODUCTION.....	I-1
THE WHAT AND WHY OF ENVIRONMENTAL PROTECTION.....	I-3
How Did We Get Here?	I-3
Where Are We Now?	I-4
Where Do We Go From Here?	I-4
Natural Resources Management 101	I-4
What Is An Ecosystem?.....	I-5
Why Balance Is So Important	I-5
What Is A Watershed?.....	I-5
Why Do Coastal Ecosystems and Watersheds Warrant Extra Attention?	I-6
What Are Natural Features?	I-7
Unique Coastal Natural Features	I-7
Why Do We Need To Protect Our Natural Resources ?	I-8
FEDERAL, STATE, & LOCAL ROLES IN ENVIRONMENTAL PROTECTION.....	I-8
What Is the Role Of Government In Resource Protection?	I-8
Federal Role.....	I-9
State Role	I-9
Local Role	I-13
Guidebook Overview.....	I-19

PART II The Law of the Land

WETLANDS.....	II-1
Why Protect Wetlands ?	II-1
Michigan's Regulatory Framework	II-4
What is Regulated?.....	II-4
What is Not Regulated?	II-4
Local Role	II-4
Nuts and Bolts of Local Wetland Ordinances.....	II-5
Using Authority from NREPA vs. the Planning & Zoning Enabling Acts	II-5
Why Protect Wetlands Smaller Than 5 Acres ?	II-6
Alternative Approaches to Local Wetland Protection.....	II-7
Case Study: Wetland Mitigation	II-8
ENVIRONMENTAL AREAS	II-9
Why Protect Environmental Areas?.....	II-9
What is Regulated?.....	II-11
What is Not Regulated?	II-11
Local Role	II-11
Case Study: When Mistakes are Made, the Environment Suffers	II-14
SOIL EROSION & SEDIMENTATION CONTROL.....	II-15
Why Protect Water from Sediment?	II-15
What is Regulated?.....	II-17
What is Not Regulated?	II-17
Local Role	II-18
Nuts and Bolts of Local Soil Erosion & Sedimentation Control Ordinances	II-18
Relationship of Local Soil Erosion Regulations and Local Zoning	II-19
Case Study: Grand Traverse County	II-20

INLAND LAKES & STREAMS.....	II-22	
Why Protect Inland Lakes and Streams?.....	II-22	
What is Regulated?.....	II-22	
What is Not Regulated?	II-25	
Keyhole Developments	II-25	
Local Role	II-25	
Procedures for Local Watercraft Control.....	II-28	
NATURAL RIVERS	II-29	
Why Protect Rivers?.....	II-29	
What is Regulated?.....	II-31	
What is Not Regulated?	II-31	
Local Role	II-33	
Alternative Approaches to River Protection.....	II-34	
Case Study: Not the Typical Urban Stream	II-34	
FLOODPLAINS	II-36	
Why Protect Floodplains?.....	II-36	
What is Regulated?.....	II-36	
What is Not Regulated?	II-38	
Local Role	II-38	
Case Study: Building a Prize-Winning Floodplain Program.....	II-40	
HIGH RISK EROSION AREAS	II-41	
Why Protect High Risk Erosion Areas?.....	II-41	
What is Regulated?.....	II-43	
What is Not Regulated?	II-45	
Local Role	II-46	
Case Study: Why Setbacks are Only Half the Battle	II-47	
SAND DUNES	II-48	
Why Protect Sand Dunes?.....	II-48	
What is Regulated?.....	II-50	
What is Not Regulated?	II-50	
Local Role	II-50	
Case Study: Port Sheldon Township.....	II-52	
Alternative Approaches to Sand Dune Protection.....	II-53	
Redevelopment	II-54	
Case Study: How Chocolay Township Started Protecting Their Dunes	II-54	
PART III Local Planning & Zoning		
INTRODUCTION.....	III-1	
COORDINATED PLANS AND PLANNING.....	III-1	
LOCAL ZONING.....	III-2	
MAJOR LOCAL REGULATORY OPTIONS FOR BETTER NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION.....	III-2	
Option 1 – Adopted Model Ordinance Language Targeted at a Single Natural Resource.....	III-3	
Option 2 – Zoning Ordinance Provisions that Target a Wide Range of Environmental Protection Considerations	III-4	
Environmental Assessment Requirements	III-4	
Fees for Professional Reviews.....	III-4	
Sensitive Area Protections	III-5	
Shoreline Protection Provisions.....	III-5	
Planned Unit Developments and Cluster Developments	III-5	
Site Plan Review	III-6	
Groundwater Protection Standards	III-7	
Option 3 – Coordinated Permit Review and Approval Procedures.....	III-7	
OTHER ZONING CONSIDERATIONS	III-8	
Rezoning	III-8	
Special Land Uses	III-8	
Variances	III-9	

Nonconforming Uses	III-9
LAND DIVISION	III-10
Land Division and Subdivision Ordinances	III-10
Problems That Can Be Prevented.....	III-12
Proactive Measures	III-14
PUBLIC SPENDING AND CAPITAL IMPROVEMENT PROGRAMS.....	III-15
OTHER KEY SOURCES FOR MORE GUIDANCE.....	III-15

LIST OF TABLES

Table 1.1 Federal Laws Relevant to Ecosystem Protection	I-10
Table 1.2 State Laws Relevant to Ecosystem Protection	I-15

LIST OF FIGURES

Figure 2.1 Wetlands	II-3
Figure 2.2 Open Space Zoning	II-7
Figure 2.3 Environmental Areas	II-10
Figure 2.4 Soil Erosion and Sedimentation	II-16
Figure 2.5 Inland Lakes and Streams	II-24
Figure 2.6 Natural Rivers.....	II-30
Figure 2.7 Floodplains	II-37
Figure 2.8 High Risk Erosion Areas	II-42
Figure 2.9 Critical Dunes	II-49
Figure 3.1 Overlay Zones	III-3

Figure 3.2 Planned Unit Developments.....	III-6
Figure 3.3 Lot Splits	III-10
Figure 3.4 Platted Subdivisions	III-11
Figure 3.5 Long Narrow Waterfront Lots	III-12
Figure 3.6 Short Narrow Waterfront Lots	III-12
Figure 3.7 Unbuildable Lots in a Floodway	III-13
Figure 3.8 Buildable Area on Lot in a Designated Critical Dune Area	III-13
Figure 3.9 Division of Land With Wetlands Should Not Result in Creation of Unbuildable Lots	III-14
Figure 3.10 Clustering Lots to Minimize Environmental Damage.....	III-14

LIST OF MAPS

Map 2.1 Michigan Townships Containing Environmental Areas	II-12
Map 2.2 Michigan's Natural Rivers.....	II-32
Map 2.3 Michigan Townships Containing High Risk Erosion Areas.....	II-44
Map 2.4 Michigan Townships Containing Critical Dune Areas	II-51

APPENDICES

Appendix A	Natural features inventory information
Appendix B	Michigan Environmental Protection Act
Appendix C	“What are Wetlands” and “Wetlands & People”
Appendix D	NREPA, PA 451 of 1994, as amended: §324.30307 (4)
Appendix E	Sample DEQ wetland ordinance

- Appendix F Sample Planning & Zoning Enabling Acts
wetland ordinance
- Appendix G Sample soil erosion and sedimentation
control ordinance
- Appendix H Sample stormwater ordinance
- Appendix I Sample keyhole development regulations
- Appendix J Sample Natural Rivers ordinance
- Appendix K Sample High Risk Erosion Areas ordinance
- Appendix L Sample Critical Dune Areas ordinance
- Appendix M Sample sand dune preservation overlay
- Appendix N Example of environmentally sensitive future
land use plan
- Appendix O Contact information for Department of
Environmental Quality and Department of
Natural Resources
- Appendix P Environmental assessment requirements
- Appendix Q Fee collection information
- Appendix R Sensitive areas protection
- Appendix S Shoreline protection
- Appendix T Cluster development and Planned Unit
Development examples
- Appendix U Groundwater protection
- Appendix V Permit coordination checklist
- Appendix W Additional reference information.